AMENDMENTS TO THE SPECIFICATION

Please amend the specification, as follows:

Replace paragraph [0036] with the following amended paragraph [0036]:

FFT unit 302 operates upon the received MCM signal r_k that is obtained from guard unit 230 and outputs the frequency domain version **R**. The output **R** of FFT unit 302 is a series of data and pilot symbol values for each symbol encoded on the received MCM signal r_k. Relative to Equation No. 2, the output **R** can be represented in the frequency-domain by the following equation

$$\mathbf{R} = \mathbf{H} \bullet \mathbf{S} + \mathbf{N} + \mathbf{U} \qquad (3)$$

where:

H is the discrete Fourier transform (DFT) of the channel's impulse response;

S is the DFT of the transmitted MCM signal;

N is the DFT of the additive white Gaussian noise (AWGN) (also known as background noise) term;

U is the DFT of the impulse noise term;

• denotes matrix (element-by-element) multiplication such that, for **S** = {[[S0, S1]] $\underline{S_0}$, $\underline{S_1}$, . . .} and **H** = {[[H0, H1]] $\underline{H_0}$, $\underline{H_1}$, . . .}, **S** • **H** = {S_0H_0, S_1H_1, . . .}; and

the **bold style** and UPPERCASE letters indicates **VECTOR NOTATION** in the frequency domain. [[.]]

Replace paragraph [0075] with the following amended paragraph [0075]:

Total-noise measuring unit 908 produces a time-domain estimate of the total noise ($\hat{d}$) and includes a demapping and pilot-insertion unit 314; a multiplier 919; IFFT unit [[332]] 322; and an adder 917. Impulse-noise estimating unit 911 produces a time-domain estimate of impulse noise content $\hat{u}$ [[(]]and includes[[:]] peaks-detection unit 326. Compensated-signal generator 913 produces frequency-domain equalized and compensated signal $\mathbf{R}^{(eq\&comp)}$ and includes: an adder 939; an FFT unit 929; optional delay unit 330; inversion unit 332; and a multiplier 935.